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# The Role of Telemedicine to Control CoVID-19

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## Dear Editor,

The coronavirus disease 2019 (COVID-19) is a severe acute respiratory infection caused by a type of coronavirus that first originated in Wuhan, China in December 2019 and quickly has spread all over the world causing the COVID-19 pandemic (1, 2). COVID-19 is rapidly expanding and has affected 304,622 people worldwide, of whom and 13,000 cases have died (death rate = 4.23) (3).

Most of the countries are currently affected by the COVID-19 pandemic, which not only threatens the public health but also affects many aspects of people's lives, particularly the global economy (4). Several measures have considered by different countries to deal with and control COVID-19. Telemedicine services are one of the most effective ways to deal with and control COVID-19 pandemic (5). Given the high risk of transmission of the disease through person-to-person contact, telemedicine can be useful in controlling the CoVID-19 by reducing direct contact. One of the important applications of telemedicine is to follow up patients after a hospital discharge (6), which can be used for patients with COVID-19, as well. Accordingly, it can reduce the contact between patients and physicians and also result in increased population surveillance.

Furthermore, one of the potentials of telemedicine is supporting triage and sorting people susceptible to COVID-19 before referral to hospitals (7). Using the televisiting and teleconsultation can be helpful for remote visiting the vulnerable cases, disinfecting public places, and limiting unnecessary trips. Televisiting also helps patients with CoVID-19 to access their required health services and more patients can be visited by physicians (8).

One of the most vulnerable groups of people to the CoVID-19 outbreak are those with chronic diseases and comorbidities (9). In these cases, regular referrals to the hospital should be avoided by telemedicine services, such as

televisiting and teleconsultation.

Physicians and other healthcare providers at hospitals are at a higher risk of CoVID-19 due to direct contact with the patients. The physicians can use telemedicine services to manage the patients with CoVID-19 remotely (10) through remote access to the patient's information, such as laboratory test results, chest radiograph and CT findings, and offering therapeutic measures based on these results to the nurses and other healthcare providers.

The teleconsultation system can be used to collect and record patients' information, such as fever, cough, and other major symptoms through isolation and quarantine periods (11), to have a complete database and provide better monitoring of the society.

However, comprehensive measures should be taken to deal with CoVID-19 considering all possible aspects, in which different parts of the health system are involved. Accordingly, telemedicine can be used as one of the effective strategies. This study briefly outlined the needs addressed by telemedicine, including follow-up and monitoring patients after discharge, visiting susceptible cases, caring for patients with chronic diseases and other comorbidities, protecting physicians and other healthcare providers, and data collection through quarantine and isolation periods. All countries are recommended to use telemedicine capacities to cope with CoVID-19 based on their national infrastructures.

## Footnotes

**Authors' Contribution:** Ali Garavand and Nasim Aslani developed the idea, abstracted and summarized the data, and wrote the manuscript.

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## References

1. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. *New England J Med*. 2020. doi: [10.1056/NEJMoa2001017](https://doi.org/10.1056/NEJMoa2001017).
2. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;**395**(10223):497–506. doi: [10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5). [PubMed: [31986264](https://pubmed.ncbi.nlm.nih.gov/31986264/)].
3. Worldometer. *COVID-19 coronavirus pandemic*. 2020, [updated 2020 Mar 21; cited 2020 Mar 22]. Available from: <https://www.worldometers.info/coronavirus/>.
4. McKibbin WJ, Fernando R. The global macroeconomic impacts of COVID-19: Seven scenarios. *SSRN Elec J*. 2020. doi: [10.2139/ssrn.3547729](https://doi.org/10.2139/ssrn.3547729).
5. Lucey DR, Gostin LO. The emerging zika pandemic: Enhancing preparedness. *JAMA*. 2016;**315**(9):865–6. doi: [10.1001/jama.2016.0904](https://doi.org/10.1001/jama.2016.0904). [PubMed: [26818622](https://pubmed.ncbi.nlm.nih.gov/26818622/)].
6. Williams AM, Bhatti UF, Alam HB, Nikolian VC. The role of telemedicine in postoperative care. *Mhealth*. 2018;**4**:11. doi: [10.21037/mhealth.2018.04.03](https://doi.org/10.21037/mhealth.2018.04.03). [PubMed: [29963556](https://pubmed.ncbi.nlm.nih.gov/29963556/)]. [PubMed Central: [PMC5994447](https://pubmed.ncbi.nlm.nih.gov/PMC5994447/)].
7. Hollander JE, Carr BG. Virtually perfect? Telemedicine for Covid-19. *N Engl J Med*. 2020. doi: [10.1056/NEJMp2003539](https://doi.org/10.1056/NEJMp2003539). [PubMed: [32160451](https://pubmed.ncbi.nlm.nih.gov/32160451/)].
8. Medical Economics. *Coronavirus and telemedicine: How it can help practices and patients with communicable diseases*. 2020, [cited 2020 Mar 22]. Available from: <https://www.medicaleconomics.com/news/coronavirus-and-telemedicine-how-it-can-help-practices-and-patients-communicable-diseases>.
9. Wu Z, McGoogan JM. Characteristics of and important lessons from the Coronavirus Disease 2019 (COVID-19) outbreak in China: Summary of a report of 72314 cases from the Chinese Center for Disease Control and Prevention. *JAMA*. 2020. doi: [10.1001/jama.2020.2648](https://doi.org/10.1001/jama.2020.2648). [PubMed: [32091533](https://pubmed.ncbi.nlm.nih.gov/32091533/)].
10. Siwicki B. *Healthcare IT News. Telemedicine during COVID-19: Benefits, limitations, burdens, adaptation*. [cited 2020 Mar 22]. Available from: <https://www.healthcareitnews.com/news/telemedicine-during-covid-19-benefits-limitations-burdens-adaptation>.
11. Wilder-Smith A, Freedman DO. Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *J Travel Med*. 2020;**27**(2). doi: [10.1093/jtm/taaa020](https://doi.org/10.1093/jtm/taaa020). [PubMed: [32052841](https://pubmed.ncbi.nlm.nih.gov/32052841/)].